

REMARKS

The June 19, 2008 Office Action noted that claims 1-12 were pending in the application; rejected claims 1-4 and 10-12 under 35 USC § 102(e); and rejected claims 5-9 under 35 USC § 103(a). In rejecting the claims, U.S. Patents 6,453,345 B1 to Jiang et al. and 6,958,005 B1 to Cabrera et al. and U.S. Patent Application Publication 2002/0161855 to Manczak et al. (References B, E and H, respectively) were cited. Claims 1-12 remain in the case. The rejections are traversed below.

Rejection under 35 USC § 102(e)

On pages 2-4 of the June 19, 2008 Office Action, claims 1-4 and 10-12 were rejected under 35 USC § 102(e) as anticipated by Jiang et al. In making this rejection, it was asserted that all of the limitations of claim 1 were disclosed in items 60-71 in Fig. 3, as described at column 9, line 54 to column 10, line 19; column 27, line 59 to some unspecified line in column 28; column 29, line 65 to column 30, line 40; and column 35, lines 49-57 of Jiang et al. However, as indicated by the title of the invention and discussed in the responses to the previous Office Action, the claims are directed to what happens "when relocation of a required metadata server is underway" (e.g., claim 1, lines 3-4). No mention of what happens to the file or data block locks described in Jiang et al. was found in the portions of Jiang et al. cited in rejecting claim 1. Furthermore, no form of the word "relocate" or "migrate" has been found anywhere in Jiang et al.

Instead of describing relocation or migration of a metadata server as required by claim 1, the cited portions of Jiang et al. describe how metadata is cached. The association of version numbers with metadata discussed at, e.g., column 29, lines 49-58, is used to keep track of changes in cached metadata and no suggestion has been found that the version numbers refer to different metadata servers. On the contrary, Jiang et al. states that "metadata 332 in the file system 331 always written back to data storage after the corresponding data 333 has been updated" (column 29, lines 63-65) which implies that the "data storage" where the metadata is stored is always the same for metadata relating to a specific file.

Like claim 1, claim 10 is directed to what happens "when relocation of a required metadata server is underway" (claim 10, last 2 lines). For the reasons discussed above, it is submitted that Jiang et al. cannot possibly anticipate claims 1 and 10, or claims 2-4, 11 and 12 which depend therefrom. For the above reasons, withdrawal of the rejections under 35 USC § 102(e) is respectfully requested.

Rejection under 35 USC § 103(a)

On pages 4-6 of the June 19, 2008 Office Action, claims 5-8 were rejected under 35 USC § 103(a) as unpatentable over Jiang et al. in view of Cabrera et al. Using language similar to that in claims 1 and 10, claim 5 recites to what happens "when relocation of the metadata server is underway during execution of operations on the virtual metadata" (claim 5, last two lines). As noted above, Jiang et al. does not describe taking into account what happens during relocation of a metadata server.

Furthermore, nothing has been cited or found in Cabrera et al. about what happens during relocation of a metadata server. The only description of relocation or "migration" in Cabrera et al. relates "to migrat[ing] portion(s) of a data stream or object suited to another storage location according to preset criteria" (column 5, lines 35-37). All of the examples of migration that have been found in Cabrera et al. relate to relocation of data, not metadata and certainly not a metadata server. The issues involved in relocation of a metadata server are significantly different than relocation of data since it is the metadata that "maintain... the various data relationships for the file or object" (column 8, lines 21-22) that is relocated by the invention disclosed in Cabrera et al. by "generat[ing] metadata for description of the migration" (column 7, last line to column 8, line 1). Nothing has been cited or found in Cabrera et al. that suggests what must happen "when relocation of the metadata server is underway" as recited in claim 5.

Claims 6-8 depend from claim 5 and therefore, it is submitted that claims 5-8 patentably distinguish over Jiang et al. in view of Cabrera et al. for at least the reasons set forth above.

On pages 6-7 of the June 19, 2008 Office Action, claim 9 was rejected under 35 USC § 103(a) as unpatentable over Jiang et al. in view of Manczak et al. Like claim 5, claim 9 recites what happens "when relocation of said at least one metadata server is underway during execution of operations on the virtual metadata" (claim 9, last 2 lines). As noted above, Jiang et al. does not describe taking into account what happens during relocation of a metadata server.

Furthermore, nothing has been cited or found in Manczak et al. about what happens during relocation of a metadata server. Rather, as discussed in paragraph [0003], Manczak et al. is directed to what happens when a "file server runs out of space or runs out of processing resources". According to Manczak et al., conventionally "a portion of the file data and metadata must be explicitly migrated to another file server and the remote nodes must be explicitly reconfigured to observe this change" (paragraph [0003]). By using the method described in Manczak et al., "migration of data is entirely transparent and automatic (on-demand upon a request to read or write to a file, or asynchronously whenever a file is being migrated to tertiary

storage" (paragraph [0009]). However, like Jiang et al. and Cabrera et al., Manczak et al. appears to require maintaining the location of metadata servers 316 (Fig. 3) to enable transparent migration of data (see, e.g., the last sentence of paragraph [0054] and the details provided in paragraphs [0034] to [0037]).

For the above reasons, it is submitted that claim 9 patentably distinguishes over Jiang et al. in view of Manczak et al.

Request for Interview

It is noted that the June 19, 2008 Office Action was issued by a different examiner than the previous four Office Actions, yet the newly cited primary reference still lacks relevance to the subject matter of the claims. If the Examiner believes that it would be beneficial to discuss the claim language, including why the applicants believe that Jiang et al. is only relevant as background art and whether claim amendments are necessary to clarify the distinctions between the invention and the prior art, the Examiner is respectfully requested to contact the undersigned by telephone prior to issuing another office action relying on Jiang et al.

Summary

It is submitted that the references cited in rejecting the claims do not teach or suggest the features of the present claimed invention. Thus, it is submitted that claims 1-12 are in a condition suitable for allowance. Reconsideration of the claims and an early Notice of Allowance are earnestly solicited.

If there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

Serial No. 10/620,387

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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Date: October 20, 2008

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